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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------------|------------------|
| 10/081,080 | 02/21/2002 | Dong Hee Lee | SEM-0003 | 2344 |
| 7590 | 03/27/2006 | | | |
| Daniel F. Drexler 55 Griffin South Road Bloomfield, CT 06002 | | | EXAMINER DESIR, PIERRE LOUIS | |
| | | | ART UNIT 2617 | PAPER NUMBER |
| DATE MAILED: 03/27/2006 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/081,080 | Applicant(s) LEE, DONG HEE | |
| | Examiner Pierre-Louis Desir | Art Unit 2681 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments filed 01/13/2006 have been fully considered but they are not persuasive.

Applicant argues that Henry teaches that Barbs 82 extend transversely from sides of the beams 78 and are dimensioned to form an interference fit between the partitions 50 of the housing. Therefore, adds applicant, the barbs are not part of the housing 44. And, accordingly, Henry does not anticipate claim 1.

Examiner respectfully disagrees. The cited passage of Henry does not show, as claimed by applicant, that the barbs are not part of the housings. As disclosed in the rejection, Henry discloses that the housing includes a contact retention chamber that is divided into contact compartments 46 by interior walls 44 that may include curved partitions. Each contact compartment retains a plunger contact 26, a cap 54, and a spring 58. Henry teaches that the barbs 82 on the beams 78 engage the partitions to retain the caps 54 in place, which in turn holds the springs 58, and the plunger contacts 26 in the contact compartments 46 (see col. 3, lines 43-56, and col. 4, lines 1-6). The barbs retained the cap that is retained by a contact compartment, which is included in the housing. Therefore, the barbs through the retaining of the cap are part of the housings. Accordingly, the rejection stands.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 11 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 11 and 13, the claims read, "...an annular hook being inserted into the coupling groove of each of the plunger housings so that each of the base cover members is engaged with each of the plunger housings." These newly presented claims contain new matters, which are not described in the specification. Referring to the only passage in the specification where coupling groove coupling groove is disclosed, the passage reads, "On the outer surface of the cylindrical connection part 35b is formed an annular hook 35c engaged with a coupling groove 32c formed on the side wall of the plunger housing 32." Thus, from the specification, the annular hook is engaged with the coupling groove. In the new claims, the applicant writes that the annular hook is inserted into the coupling groove, which is different from what is stated in the specification. This writing constitutes new matter.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-5, 7-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Henry et al. (Henry), U.S. Patent No. 6663439.

Regarding claim 1, Henry discloses a battery connector for a mobile phone (i.e., electrical connector) (see abstract), installed in a main body of the mobile phone (see col. 1, lines 18-21) and contacting a battery terminal to supply power to a printed circuit board of the mobile phone (see col. 3, lines 7-9), the battery connector comprising: a body having a plurality of plunger housings (see fig. 1), each of the plunger housings having a coupling groove formed on an outer surface at a lower end of each of the plunger housings (i.e., the barbs 82 on the beams 78 (FIGS. 4 and 5) engage the partitions 50 to retain the caps 54 in place, which in turn holds the springs 58, and the plunger contacts 26 in the contact compartments 46) (see col. 3, lines 43-56, and col. 4, lines 1-6); a plurality of plungers each slidably installed in each of the plurality of plunger housings of the body (see fig. 1, col. 2, line 65 through col. 3, line 2); a plurality of base cover members each having a cylindrical connection part engaged with coupling groove of each of the plurality of plunger housings (i.e., plunger contacts contain a rounded portion plunger portion wherein rectangular contact plates corresponding to the plunger contacts are disposed) (see figs. 1-2, , col. 2, line 65 through col. 3, line 3, and col. 3, lines 10-25, and line 57 to col. 4, line 6), a bottom surface of each of the base cover adhered to the PCB by soldering (see col. 4, lines 11-12) and made of conductive material (i.e., conductive contacts) (see col. 3, lines 4-5); and a plurality of coil springs (item 58) each biasing each of the plungers in the plunger housings against the bottom of each of the base cover member (see fig. 2, col. 3, lines 20-26, col. 4, lines 17-35).

Regarding claim 2, Henry discloses an electric connector for providing electric connection between an electric power source and an operating member (see abstract, and col. 3, lines 7-9), comprising: a contact plunger for making contact with the electric power source (see fig. 1, and abstract), the contact plunger being made of conductive material (see col. 3, lines 28-30); a housing for slidably receiving the contact plunger (i.e., aperture) (see fig. 1, col. 2, line 65 through col. 3, line 2), the housing having a coupling groove formed on an outer surface at a lower end of the housing (see figs. 4-5, col. 3, lines 43-56, and col. 4, lines 1-6); a coil spring (item 58) disposed under the contact plunger inside the housing, for providing the contact plunger with elasticity and being made of conductive material (see fig. 2, col. 3, lines 20-26, col. 4, lines 17-35); and a base member disposed between the housing (see fig. 1, , col. 2, line 65 through col. 3, line 3) and the operating member for fixing the housing at a selected region on the operating member (see col. 4, lines 11-12), the base member being made of conductive material (i.e., conductive contacts) (see col. 3, lines 4-5).

Regarding claim 3, Henry discloses an electric connector (see claim 2 rejection) wherein the contact plunger comprises a contact portion (i.e., rounded plunger portion 30) for making direct contact with the electric power source, the contact portion protruding from an upper opening of the housing (see fig. 1, col. 2, line 65 through col. 3, line 2); a guide portion slidably disposed inside the housing (see fig. 2, col. 3, lines 12-26), the guide portion having contact with inner surface of the housing (see fig. 2); and a spring fixing portion extending downward from a lower end of the guide portion (see fig. 2), the spring fixing portion extending downward from a lower end of the guide portion (see fig. 2), the spring fixing portion being disposed to be engaged with the coil spring (see fig. 2, col. 3, lines 35-42).

Regarding claim 4, Henry discloses an electric connector (see claim 3 rejection) wherein the housing comprises a shoulder formed at the upper opening of the housing (i.e., contact retention chamber 42) (see fig. 2, col. 3, lines 12-14), the shoulder extending inward from edge of the upper opening of the housing (see fig. 2).

Regarding claim 5, Henry discloses an electric connector (see claim 4 rejection), wherein the shoulder makes direct contact with an upper edge of the guide portion of the contact plunger in response to elastic movement of the coil spring (see fig. 2, col. 3, lines 12-26).

Regarding claim 7, Henry discloses an electric connector (see claim 2 rejection) wherein the base member is soldered at the selected region on the operating member (see col. 4, lines 8-13).

Regarding claim 8, Henry discloses an electric connector (see claim 2 rejection) wherein the electric power source is a battery having a terminal to be in contact with the contact plunger (see col. 2, line 65 through col. 3, line 2).

Regarding claim 9, Henry discloses an electric connector (see claim 8 rejection) wherein the operating member is a circuit board for receiving electric power from the battery (see col. 2, lines 61-65).

Regarding claim 10, Henry discloses an electric connector (see claim 8 rejection) wherein the electric connector, the circuit board, and the battery are included in a mobile phone (see abstract, col. 1, lines 18-21, and col. 2, lines 61 through col. 3, line 2).

Regarding claim 11, Henry discloses a battery connector (see claim 1 rejection), wherein the cylindrical connection part of each of the base cover members comprises an annular hook being inserted into the coupling groove of each of the plunger housings so that each of the base

cover members is engaged with each of the plunger housings (see figs. 4-5, col. 3, lines 43-56, and col. 4, lines 1-6).

Regarding claim 12, Henry discloses a battery connector (see claim 1 rejection), wherein each of the plungers comprise: a contact portion for making direct contact with the battery terminal, the contact portion protruding from an upper opening of each of the plungers housing (see fig. 1, col. 2, line 65 through col. 3, line 2); a guide portion slidably disposed inside each of the plunger housings, the guide portion having contact with an inner surface of each of the plunger housings (see fig. 2, col. 3, lines 12-26); and a spring fix portion extending downward from a lower end of the guide portion and being inserted into each of the coil springs to be engaged with each of the coil springs (see fig. 2, col. 3, lines 35-42).

Regarding claim 13, Henry discloses a connector (see claim 2 rejection) wherein the base member comprises an annular hook being inserted into the coupling groove so that the base member is engaged with the housing (see figs. 4-5, col. 3, lines 43-56, and col. 4, lines 1-6).

Regarding claim 14, Henry discloses a connector (see claim 13 rejection) wherein the annular hook is formed at a connection at an upper end of the base member, the connection part having a cylindrical shape (see figs. 4-5, col. 3, lines 43-56, and col. 4, lines 1-6)

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kobayashi, "Connector Assembly For Electronic Devices," U.S. Patent No. 5066235.
Lok, "Battery Connector," U.S. Patent No. 6068519.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Louis Desir whose telephone number is (571) 272-779. The examiner can normally be reached on Monday-Friday 8:00AM- 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2681

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pierre-Louis Desir
AU 2681
03/08/2006



JOSEPH FEILD
SUPERVISORY PATENT EXAMINER